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EDITORIAL.



This is the first issue of the journal for the new decade and, although reviews of the past 10 years and previews of the next 10 are commonplace, it is probably appropriate to at least review the 1970's as far as Herpetofauna is concerned.

It was on the 4th January 1970 that Herpetofauna reappeared (as a roneo newsheet) after a seven year absence. Since then it has maintained a continuous (at times irregular) publication, first as the journal of the Australian Herpetological Society and during the past 5 years as the journal of the Australasian Affiliation of Herpetological Societies. Should we preview the next ten years? If Herpetofauna survives the decade there is no doubt that it will be a far different publication to that presently produced.

Circulation will certainly have to increase and with this, a more professional production, distribution base.

Will the content change? Hopefully not, for Herpetofauna is not intended to cater to any one aspect of herpetology but endeavours to embrace a broad range of herpetological interests. The recent activities in the herpetological symposium field would indicate an increased interest in herpetology which, with the continued protective legislation might accentuate study & breeding rather than the mere keeping of reptiles.

Whatever eventuates, the herpetologist by his very nature, will continue along his chosen path and hopefully Herpetofauna will also continue to provide a means by which he can publish material and learn from the articles of others.

Cover photograph: Banded Skink (*Sphenomorphus richard soni*)

— Peter Richardson.

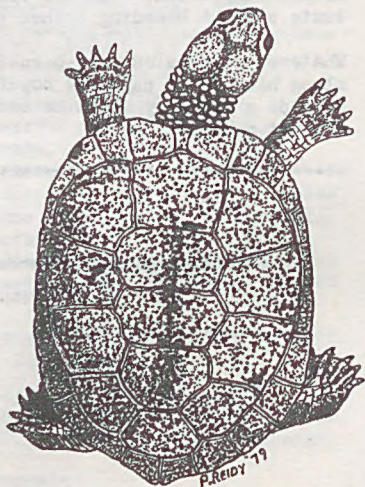
Swan song for Western Australian tortoise?

by Peter Reidy, c/- 16 Suspension Street, ARDEER. VIC. 3022

HISTORY

The Western Swamp Tortoise was first collected by the German naturalist Dr. J. Preiss in 1839, just ten years after the formation of a colony at Perth (then called the Swan River Colony). The single specimen was forwarded to the Natural History Museum, Vienna where it remained for over sixty years, unidentified and undescribed, its place of origin listed simply as "New Holland". In 1901 Dr. Friedrich Siebenrock established a new genus Pseudemydura and named the tortoise Pseudemydura umbrina.

Nothing more was heard of the tortoise until 1953. In July of that year Mr. A. Gates found a small tortoise crossing a road in an area of swampy country near Bullsbrook W.A., some 40km north of Perth, and gave it to a junior naturalist named Robert Boyd who exhibited it at the Annual Wildlife Show of the Western Australian Naturalists Club. As all exhibits needed a label with explanatory notes he approached Mr. Vincent Serventy who was organising the exhibits, seeking assistance on the tortoise's identity and habits. Robert explained that the tortoise had been found in a swamp near Perth, and Mr. Serventy, knowing that only one tortoise (Chelodina oblonga) was known to occur in the South-West, and without really taking a close look at the tortoise in question, replied that it was a young long-necked swamp tortoise. Robert looked unconvinced as he enquired, "but Sir mine has a short neck". Mr. Serventy realising that the tortoise was unusual, but suspecting it had been imported from elsewhere and subsequently escaped, showed it to the then Director of the Western Australian Museum, Mr. L. Glauret, who in 1954 described it as a new species, Emydura inspectata. In 1958 Dr. E. Williams of Harvard University read Glauret's description of the new species and realised that it was in fact the same tortoise collected by Preiss in 1839.



So after being "lost" for over 100 years, Pseudemydura umbrina had re-appeared.

Following the re-discovery of the Western Swamp Tortoise or Short-necked

Swamp Tortoise as it is also known, a public appeal was set up in 1961 to raise enough money to buy the land at Bullsbrook from the owners and make it a reserve. In 1963 a further 27 acres was purchased to bring the total area of the two reserves, at Twin Swamps and Ellen Brook to 535 acres.

Inspection of the reserves by the Public is encouraged in the form of road side signs, which give the location of the reserves. However, the casual visitor would be extremely lucky to actually sight a tortoise due to their small size, low numbers and secretive habits. Because of this, and in an effort to minimise disturbance to the ecology of the reserves, I personally believe that the reserves should be closed to the general public, and entry be allowed only to holders of an entry permit.

DESCRIPTION AND BIOLOGY

Intergular shield very broad, heart shaped and separating gulars and humerals and partly separating pectoral shields; head covered with tuberculated skin; skin over temples wrinkled to form large flattened tubercles; snout flattened; top of neck covered with large conical pointed tubercles; barbels small (Goode 1967).

P. umbrina is Australia's smallest tortoise, rarely exceeding a carapace length of 15.25cm. All the toes are webbed, but more so on the hind limbs. Small scaly flaps on the rear margins of the fore-limbs are a distinguishing characteristic. The females are smaller than males and have flatter plastra (Spence, Fairfax & Loach 1979).

P. umbrina's known range is from Pearce Airforce Base then south through bushland containing many semi-permanent swamps to Guildford (Perth) Airport, a distance of approximately 35km (Burbridge pers. comm.). These swamps usually fill with the first heavy winter rainfalls about June, and are dry again by December. Except for very cold periods it spends the winter months in the water feeding on tadpoles, small crustaceans of several species, aquatic worms and certain water plants which constitute its diet.

Mating takes place in the spring, and later as the swamps are drying out the tortoises leave the water. The females lay and bury their 3 to 4 eggs, and all the tortoises conceal themselves below sand and leaf litter where they aestivate during the summer and autumn, until the June rains again fill the swamps.

The six month incubation period of the eggs, coincides with the amount of time adults spend in aestivation. As the swamps are beginning to fill again, both the newly hatched juveniles and the adults emerge from the sand on the perimeter of the swamps, and make their way to the water at about the same time.

STATUS

Dr. A.A. Burbridge, Chief Research Officer, Western Australian Wildlife Research Centre, Department of Fisheries and Wildlife in a personal communication stated:

"The best available data at present suggests that in 1977 there were 14 to 25 tortoises at the Twin Swamps Nature Reserve, and 7 to 10 at Ellen Brook Nature Reserve. These estimates are calculated from mark and recapture data and are only estimates.

"In 1966 the relevant estimates were:- Twin Swamps Nature Reserve 98 to 244 and Ellen Brook Nature Reserve, 8 to 11. You will see there appears to have been a drastic decline in numbers at Twin Swamps Reserve but not at Ellen Brook. I attribute this decline to a series of winters with low rainfall which have prevented recruitment, and to predation by foxes." He did not offer an explanation as to why numbers have declined in one reserve and not in another only a short distance away but clearly, the Western Swamp Tortoise is disappearing over its whole range.

P. umbrina occupies a very fragile corner of the State. The forests along the Darling Ranges are all that protect the coastal plains from the millions of square miles of desert to the East. Already more than three-quarters of the original forests have been cleared for agriculture and timber. Three mining companies hold mineral leases over most of the Darling Ranges State Forest, and one company alone was clearing 270 ha of forest in 1978 for its bauxite mining operations. The fungus disease Dieback (Phytophthora cinnamomi), is also a major threat to the forests, and is estimated to be killing 4,000 ha of Jarrah Forest annually. The disease is spreading at the rate of 20,000 ha annually.

P. umbrina inhabits the lowlands swamp country but continued large scale destruction of forests, by any means, must have disastrous effects, not only on the Western Swamp Tortoise in its limited range but on all the South-West ecosystem.

Perth and the surrounding countryside has recently endured two very harsh and unusually long summers, which would have reduced the time available to the species for breeding activity and the gaining of "condition" for the long summer aestivation. Bushfires too are always a threat as is predation by foxes, feral cats and dogs.

Due to the tortoises secretive nature and its small numbers at the Bullsbrook Reserves, the only place where you can be assured of seeing the tortoise is at Perth Zoo. They received thirteen individuals in 1963 as a hedge against the loss of the Bullsbrook colonies, and have been successful in breeding the species. Presently, they hold twenty-two specimens in an enclosure which attracts much attention from visitors, due mainly to the Press who over the years have given publicity to the birth of young tortoises at the zoo. (Spence, Fairfax & Loach 1979).

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The locality of Flat Island.

By John McCallum, A.U.F.C. Geology Department, University of Auckland,
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The holotype of Leiolopisma homalonotum is labelled as having been collected on Flat Island in the Mokohinau Group, 110km north of Auckland, New Zealand. There is some confusion over the origin of this specimen and the holotype of L. suteri, both of which were collected by Dr. H. Suter at the turn of the century.

McCann (1955) states: "Boulenger (1906) gives the type locality for suteri as the Great Barrier Island, but on the specimen the label reads: "Flat Island, Mokohinau". While, on the type of L. homalonotum, which was described at the same time, the label reads "Gt. Barrier Is." It seems ... the labels have been wrongly attached at the time of renewal."

So McCann infers that L. homalonotum originated from Flat Island, while Hardy (1977) suggests that the labelling is correct and Boulenger's type locality is confused: "Both species are known from Great Barrier Island, but L. homalonotum has not been recorded from Flat Island, Mokohinau group, since Boulenger's (1906) report. Because the habitat of Flat Island is considered unsuitable for L. homalonotum (A.H. Whitaker, pers. comm.), it is quite possible that Boulenger's records of type localities for L. suteri and L. homalonotum were inadvertently interchanged".

McCann (1955) also mentions Flat Island when referring to the distribution of Lepidodactylus lugubris, an introduced gecko which has not been reported in recent years.

Apart from these statements there is little mention in other literature of Flat Island in the Mokohinau Group. Nautical Survey charts, Lands and Survey Department maps and other available sources make no mention of this island.

It is generally thought that Lizard Island, situated in the Mokohinaus, is the island formerly known as Flat Island. This is because of its low flat appearance and L. suteri (which was supposedly collected there) was common in the past. (Whitaker 1978).

To confuse the matter further there is a Rangiahau Island, locally known as Flat Island, situated off Great Barrier Island, some 24km south of the Mokohinaus. The name Flat Island, at this location, is well known.

It is therefore possible that the name of the island group from which the specimens were collected was confused at some time during their history. Thus both holotypes may have originated from Great Barrier, with either L. homalonotum or L. suteri being collected on Rangiahau Island, depending upon McCann's (1955) or Hardy's (1977) view point.

Summary

Apart from several herpetological publications (Boulenger 1906, McCann

1955, Hardy 1977), there is little other literature concerning a Flat Island in the Mokohinau Group. However, an island with this name is situated near Great Barrier Island. This article suggests that the name "Great Barrier" was substituted for "Mokohinau" by Boulenger in 1906 and on the labelling of the holotypes of the two species, both of which may be considered to have been collected on, or in the near vicinity of, Great Barrier Island.

ACKNOWLEDGEMENTS

I would like to thank Mr. T.G. Lovegrove, Assoc. Prof. J. Robb and Mr.C. R. Veitch for assistance and constructive criticism in preparing the manuscript.

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The Pink-Tongued skink (Tiliqua gerrardii) in captivity.

By Ray Field, 1 Faraday St., Wulguru, Townsville. QLD. 4811

Observations of specimens kept in captivity; feeding, courtship, mating, the care of new-born young, growth rates and diseases are described.

Five mature specimens from the Mount Spec area of North Queensland were housed in an all glass vivarium measuring 1.5 x 0.6 x 0.6 metres. Heating and artificial light supplied by two 100 watt lamps which were controlled by a dimmer switch.

The vivarium was set up with earthen floor, rocks, hollow logs, bark, live ferns, branches and leaf litter. A water tray was set into the floor of the vivarium. The cage was cleaned on a weekly basis.

When originally introduced to the vivarium, the skinks quickly settled down, adopted their own individual locations of shelter and tended to

shelter regularly in the same place. Preference was given to the hollow logs or under bark. The skinks moved freely about the cage and there was little evidence of territorial disputes. Until the mating season the only disputes were over food. It was not uncommon to find two or more skinks sheltering in the same location.

Table 1

Specimen Sex Total length

1	F	45cm	Dark brown with lighter broken bands that disappeared before the tail. Ventral surface brown to cream.
2	F	40cm	Dorsal surface and sides almost jet-black, but flecked with a silvery grey in very narrow bands on the sides of body. Ventral surface brownish grey to apricot.
3	F	36cm	Plain olive brown body with only the tip of the snout dark brown. Ventral surface cream to light brown with the throat almost orange.
4	M	41cm	Dorsal surface brown with broken irregular bands of lighter brown extending partly down the sides of the body. Cream ventral surface.
5	M	30cm	Dark brown almost black with bold near white regular bands from the snout to the tip of the tail, giving the skink a Zebra like appearance. Ventral surface cream to brown with darker blotches.

The skinks tended to be more crepuscular than nocturnal, and although they moved about frequently at night, it was rarely more than two or three hours after sunset. Very warm and humid nights were the exception. Similarly, the skinks moved around in search of food for a short period about mid-morning. Occasionally several days would go by before some of the skinks were seen at all.

The skink generally moves on all four legs. The hind legs are usually dragged when the skink is descending, moving over very rough terrain, or when the use of the hind legs becomes an impediment, for example when crawling through a small hollow log.

Their arboreal feats are not spectacular, however they are extremely adept at climbing, and ascend relatively smooth vertical surfaces with ease. Their climbing motion is very deliberate, with the skink making full use of its long strong claws. The tail although somewhat prehensile, appears to play only a minor roll in the skinks' movements. It was never observed entwining a branch in the manner of a possum to completely support the weight of its body. The tail is used however, as a very definite support, mostly when the skink is descending and usually in conjunction with the hind legs, which are dragged using the claws as a brake.

In an experiment designed to test the skinks' ability to make full use

of the prehensile tail, a thin sapling was placed across the top of an open cardboard box. The skinks were then individually placed on the centre of the sapling which was too narrow to allow them to crawl in the normal manner to the edge of the box. Each skink hung by all four legs partially supported by the tail which was used with varying degrees of success to entwine the sapling. The experiment and several similar experiments produced no definite result. Although specimen no. 5 was capable of making it's way across the sapling in this position, the other four specimens made no attempt to cross. However both specimen no. 2 and no. 4 were able to turn around on the sapling in that unnatural position, a feat which appeared much more difficult than simply crossing the sapling. From these experiments and also from general observations, it appears that the prehensile tail plays a minor role in the skinks' mobility.

Their main food was snails and slugs for which they showed a preference. No interest was shown in smaller skinks and very little interest in insects, with only the occasional soft-bodied insect such as crickets or cockroaches being taken. Specimen no. 1 consumed a very small mouse. None of the skinks showed any interest in a variety of fruit introduced to the vivarium. A prepared mixture of minced bullocks heart, liver, kidney, brains, mince, raw eggs (including the shell) and a calcium supplement was substituted when snails and slugs were not obtainable. While this mixture has proved to be an adequate diet as a substitute for natural food for the larger Tiliquas and Egernias it was used with reservation to supplement the Pink-tongues' diet because of apparent vitamin or calcium deficiencies. I have noted that captive bred Tiliqua scincoides and T. gerrardi develop lumps and/or depressions in the backbone and bulging eyes if fed only raw meat. These deformities develop quickly especially in juvenile Pink-tongues and their mortality rate is very high in the first few months. Those who survive bear the deformities until their eventual demise before maturity. I have observed two broods of captive bred Tiliqua scincoides where all the new-born were deformed. The deformities ranged from missing limbs (in some instances more than one limb) to deformed jaws and one pathetic specimen with no bottom jaw at all. In both instances the keepers of the parent reptile fed their skinks entirely on mince.

Large snails were usually crushed before being given to the skinks for food because of the difficulties they had in breaking the shells. There appear to be three main methods adopted by Pink-tongues to extract the body of the snail from it's shell. The first method is to simply crush the shell with the jaws. In the second method the skink grasps the exposed body of a snail on the move, and, in a complicated motion of chewing, rolling over and forcing the snail shell against the ground or convenient rock, extracts the fleshy body of the snail without having to crush the tough shell. This seemingly impossible task may take upwards of two hours of concerted effort before the skink is successful, and it is usually this operation which develops into a dispute, sometimes with more than one other skink interested in stealing the snail from it's original attacker. The third and least successful operation involves the skink attempting to break off only portions of the shell at a time. This method is usually resorted to when the skink cannot crush the shell because of it's large size, and cannot grasp the fleshy body of the snail which has withdrawn to the protection of the shell. By forcing it's bottom jaw into the entrance of the shell the skink is able to break off small pieces of shell after gaining sufficient leverage from forcing the shell against the ground. When the skink has succeeded in breaking away enough shell to expose the snail's body it then resorts to the second

method of extraction. It was not uncommon to see a skink carrying a snail about the cage in the manner just mentioned.

For some reason the skinks seemed to have difficulty in locating slugs released into the vivarium for food. Although the Pink-tongues readily accepted them when already chopped up, most of the live slugs were not taken.

Pink-tongues prefer a more humid environment than most skinks. Because of this it was my practice to lightly sprinkle the interior of the vivarium with water once a week. I have noted that juvenile specimens especially show signs of dehydration after a relatively short period without moisture.

Courtship commenced in early September and continued for approximately six weeks with males fighting during this period. The largest female (specimen no. 1) did not appear interested in mating and during this six week period and for some time after became quite solitary in the cage, biting and fighting off any skink, male or female, that approached.

The battles between the males were one sided with the larger male specimen (no. 4) dominating the much smaller specimen (no. 5). There were no really aggressive fights as occur between Major skinks (Egernia frereri) or the Blue-tongues (Tiliqua scincoides).

The copulatory act occurs with the male grasping the female's head with it's jaws. After wrestling it's body into a semi-mounted position the male brings the penis into contact with the female's vent. From my restricted observations it was not possible to determine if the penis entered the cloaca of the female, or whether sperm was merely deposited on the surface of the vent. I did not observe any courtship ritual. On a single occasion I observed the copulatory act for approximately twenty minutes. Most of this time was spent in the male attempting to subdue a seemingly not interested female, which suffered small lacerations to the side of the head during the affair (specimen no. 3).

It was not possible to determine the gestation period.

Specimen 2 produced 14 young on the 5/1/79.

Specimen 3 produced 17 young on the 13/1/79.

There were no deformities and no still births.

Despite the extreme variation of colour in the parent skinks, all of the juveniles were a uniform very light brown with almost black bands from the tip of the snout to the end of the tail. The juvenile skinks were all between 7-8 centimetres in total length. Growth rates were taken over a six month period, during which time the largest juvenile attained 17cm in length and the smallest a modest 11cm. (Fig I).

The young were fed a similar diet to the adults. They accepted insects more readily and also consumed chopped up worms. They were not offered the mixture previously mentioned.

During the 6 month period before their release, most of the young underwent gradual but distinct colour changes. One specimen changed colour twice during the period. Generally they lost the prominent darker bands, with one specimen losing them entirely.

In the first 2-3 months the young skinks were active mainly in daylight hours, especially in the mornings. This trait gradually aligned itself with the more crepuscular habits of the adult skinks.

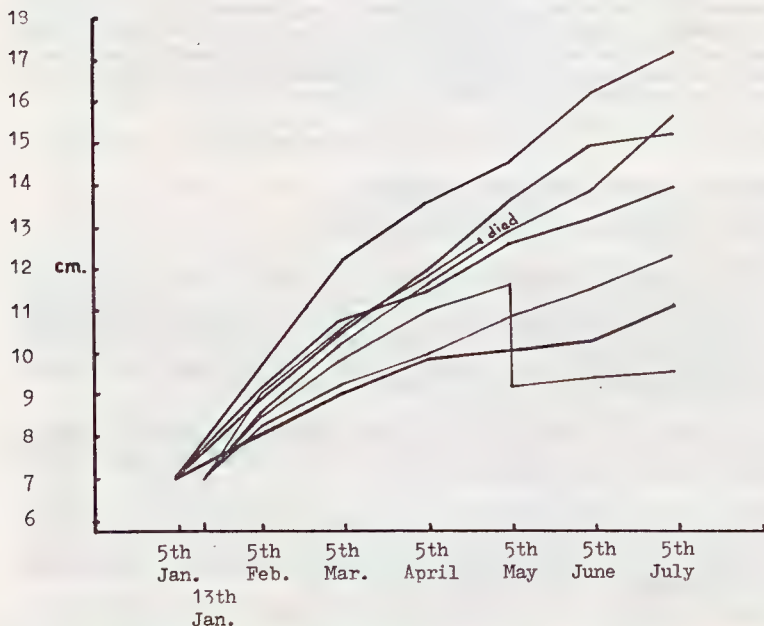
There was no evidence of fighting among the juveniles other than minor disputes over food.

Apart from one juvenile that was crushed during a clean up of the vivarium the only other skink that suffered from it's stay in captivity, lost portion of it's tail and all of it's toes on one hind leg because it was unable to slough completely. The old skin gradually shrank and cut off the circulation.

Mites were introduced to the vivarium via a hollow log previously used with captive reptiles. Fortunately it was noticed before it became a serious problem. A solution of one part "ASUNTOL" to one hundred parts water was prepared and the skinks were washed in the solution 4 times over a three week period. The vivarium was also disinfected with a much stronger solution. The infestation was overcome without any apparent harmful affect on the skinks.

All of the skinks were released into various suitable habitats on Mount Stuart on the 6/7/79.

FIGURE I



Capture of a further specimen of Python oenpelliensis.

By R.J. Begg and K. Martin, Territory Parks & Wildlife Commission,
P.O. Box 38496, Winnellie, N.T. 5789

Python oenpelliensis is a poorly-known snake belonging to the reticulatus group of the genus Python (Family Boidae). Despite its large size (exceeding 4.0m) the species was only recently described (Gow, 1977). All specimens to date have come from the fringe of western Arnhem Land, Northern Territory. The holotype and paratype were found near Oenpelli (12°21'S, 133°01'E) and Little Nourlangie Rock (12°51'S, 132°48'E) respectively. Since its description, a specimen has been found at Cannon Hill (12°21'S, 132°57'E) (Miles, pers comm.) and is currently held alive by Territory Parks and Wildlife Commission. Three more have also been found in the Little Nourlangie Rock area. The first of these is live in the N.T. Museum (Gow, pers. comm.), and the second was photographed and released (Swanson, 1979). The latest specimen, a female, the subject of this paper, was caught on 15 July, 1979.

The capture site was at the base of a ring of cliffs of Kombolgie sandstone, to 50m in height, adjacent to a recently-burnt thicket of Acacia conspersa and Acacia sp., at about 20m above sea level. The temperature was 23°C and the day relatively windy.

When first observed, at 0830 hours, the snake was apparently active in the branches of a 7m Cryptocarya cunninghami. The tree was 2m from the cliff face, and as the latter had a south-westerly aspect, was still in the morning shade.

During capture and subsequent handling the specimen proved to be remarkably docile and made no attempt to bite.

The background colouration of the snake was light grey, with irregular yellow-brown blotches on the dorsal and lateral surfaces. The ventrum was a pale cream. Recent sloughing had occurred as evidenced by the glossy sheen of the scales and the remains of old skin around the eyes. Numerous ticks were present, particularly on the head, and several skin worms and a few minor scars were found about the body. The following measurements were taken:-

total length - 4.3m; snout-vent length - 3.7m.

Scale counts were: ventrals - 445; mid-body - 72;

Sub-caudals - 8 divided, 3 single, 133 divided.

When released into the tree from which it was taken, the snake climbed 5m, bridged a gap of 2m to the rock face then climbed the rocks.

ACKNOWLEDGEMENTS:

Our thanks are extended to G. Greenhalgh who first saw the specimen.

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Leiopisma striatum (Buller) is a rare and endangered species.

By Philip S. Melgren., 135B Coronation Ave., New Plymouth. N.Z.

Introduction

Leiopisma striatum is now an endangered species. The rotting timber of the former lowland forests where it once thrived was the Tree skins' last stand.

As one Huinga farmer pointed out to me "The reason why there aren't any skins left is because there aren't any logs left". Back in the late 1960's and early 1970's these skins were common in the Douglas/Huinga area, and could be found wherever there was rotting timber. However, in recent years the logs have either rotted away or have been burnt and removed. The clearing of suitable habitat is the main reason but not the only reason for this species becoming endangered. Over-collection of L. striatum has also greatly reduced numbers although collection from the wild today can only benefit this species, as this would enable captive breeding colonies to be set up.

Description

L. striatum is a medium size skink with a SVL of 70-80mm and a tail length of 90-100mm. Midbody scale rows 28-33. Lamellae range from 18-24. Coloration: A mid dorsal band of medium brown extends the entire length of the body and tail. This band is flecked with equidistant white spots finely margined with black. A broad dorsolateral band of cream or white extends from above the eye into the tail. An upper lateral medium brown band (of similar width to mid dorsal band) runs the entire length of the body and tail. The lower lateral is light brown to grey with irregular white and dark brown flecks.

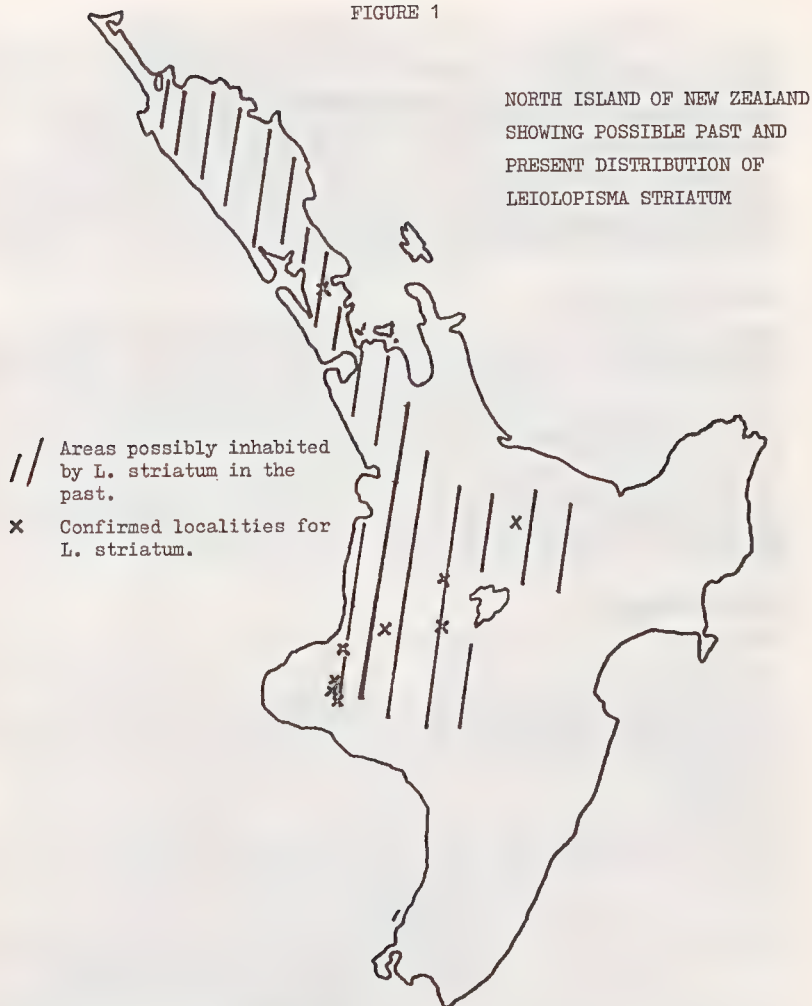
The ventral surface is yellowish with scattered dark brown flecks, and the throat is cream with occasional light brown spots. The limbs are medium brown with irregular white flecks and streaks. This is the basic colour pattern which can vary in colour intensity.

Distribution

L. striatum was thought to have a restricted distribution in eastern Taranaki and the King Country area. However other populations have been reported. Robb (1974) listed Kaipara as a further locality and Hardy (1977) gave the Mamaku Plateau near Rotorua. L. striatum has now a relict distribution although it was once probably distributed over much of the North Island of New Zealand (See Fig 1).

The confirmed localities for L. striatum are Taranaki (Pehu, Douglas, Huinga and Mangamingi), the King Country (Ohura, Kakahi and Benneydale), on the Mamaku Plateau near Rotorua and the Kaipara Flats area. McCann (1955) noted that in 1949 he had caught a specimen of L. latilinearum (= L. striatum) at Island Bay, Wellington. However, as the specimen escaped and no further specimens have been found, confirmation of this locality is impossible. N.B. Hardy (1977) gave Uruti (misspelt as Uriti) as a confirmed locality for L. striatum. However, the specimen found in that area was found closer to the Pehu district (P.L.Winter pers. comm.) and is listed here as Pehu.

FIGURE 1



Habits and Habitat Requirements

L. striatum is diurnal, arboreal in habit, and is viviparous. *L. striatum* appear to have a slow growth rate by comparison with other species. At 20-22 months a specimen of *L. nigriplantare maccanni* would be mature, but at this age *L. striatum* would only be just over half the length of an adult. Sloughing occurs infrequently at 5-6 month intervals and is shed in pieces. *L. striatum* is insectivorous but will accept soft fruit. In captivity this species spends most of its time off the ground climbing, feeding and sleeping amongst the foliage provided. Individuals of *L. striatum* have survived in captivity for 13 years (P.L. Winter, pers. comm). Wild caught specimens taken from cleared land are usually found

living in rotting logs and in the Douglas/Huinga area Hoplodactylus pacificus has been found in similar habitats. L. striatum has been taken from the rotting timber of Matai (Podocarpus spicatus) and Rimu (Dacrydium cupressinum), although individuals have been found in Totara trees (Podocarpus totara). All localities for L. striatum are from hill country previously covered in lowland forest (mixed hardwood). In its natural habitat L. striatum probably lives several metres off the ground beneath the bark of various hardwood trees (Matai, Rimu and Totara). In winter L. striatum appears to move to swamp areas (bottom of gullies) where it partially hibernates in the mud.

Rare and Endangered

All known populations of L. striatum are fast disappearing or have already disappeared. The only locality in New Zealand where L. striatum have been found in reasonable numbers is the Douglas/Huinga area. However, today even in these areas it is a rare occasion to sight a tree skink (L. striatum). This is not only due to the clearing of suitable habitat for farmland etc. but also due to over collection by herpetologists. What few remaining specimens are left appear to be doomed to extinction. The only likely way this species could survive is to start captive breeding colonies which would entail co-operation between the New Zealand Herpetological Society, private individuals and the Wildlife Service.

Acknowledgements

I thank Mr. P.L. Winter for access to his collection and information on this species; Mr. W.D. Wilkinson for letting me aid him in his search for populations and for discussion on this species; Mr. J.A. West for information regarding nomenclature and of course all the farmers in the Douglas/Huinga area who have helped by both giving their time and relating any observations of this species.

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Captive breeding and a novel egg incubation technique of the Childrens Python (Liasis childreni).

By Brian Barnett, 16 Suspension Street, ARDEER, VIC. 3022

My Childrens Pythons are not housed individually but kept together throughout the year in one community cage. As L. childreni have a good record of breeding under these conditions, I have never worried about the separation of sexes prior to planned matings.

On the 15th June 1979 two of the pythons were observed mating. They were not disturbed and were connected for a minimum of 50 minutes. This female failed to produce eggs. No other matings were observed (the cage is equipped with hideboxes). Regular checks were made of the females and in mid September one was found to be gravid.

On the 10th October 1979 she deposited 4 eggs. Three eggs measured 5cm x 2.2cm and the fourth 5.5cm x 2.1cm.

The four eggs were placed in a plastic container and in the incubator. Vermiculite was used as the hatching medium and it covered the eggs by approx. 1cm. The vermiculite was then given a liberal spray of water. During the period of incubation, the eggs were kept between 29.5° and 32°C. The eggs were inspected each day and the vermiculite given a fine spray of water when thought necessary. In the early stages of incubation this was almost daily but became less frequent later (the container was sealed).

I had my E.D.A. (Estimated date of arrival) worked out as the 1st December and on inspection of the eggs on the 9th November, I was surprised to see one of the eggs split open almost from end to end. This was only 31 days into incubation and just over half of the estimated time for incubation. On close inspection it was found that the egg had burst open and that the embryo was not sufficiently developed and certainly not ready to emerge. The egg had burst from excessive internal pressure due to the absorption of too much moisture. The egg was removed from the medium and given a closer inspection. Watching the 'little pink snake' laying there in his now wrecked egg made the mind search for a solution rather than throw it out and put it down to experience. The thought of a humidicrib came to my mind and anything was worth a try. The snake was still in the shell, which was wide open. If I applied the right conditions maybe it could work.

The humidicrib was set up from a clear top plastic bread container without any ventilation. 2cm of vermiculite was placed in the container and given a heavy spray of water, more than would normally be given to incubating eggs. The clear plastic top was used in order to be able to observe the egg without opening the container. Suspension of the egg was considered necessary and the next step was to cut the bottom out of a 500gm margarine container from which the egg could be suspended. Removing the bottom of the container would allow water vapour to circulate more freely and evenly once it was placed on the vermiculite. The egg was then suspended by threading cotton through the split edges in four places so as to give a large observation window. The four threads were then stitched and tied to the top edge of the container (Fig. I). The egg was suspended so that it did not touch the vermiculite and was approx 1cm above it. While the egg was being stitched and tied, some of the clear albumen spilled over the side and was lost.

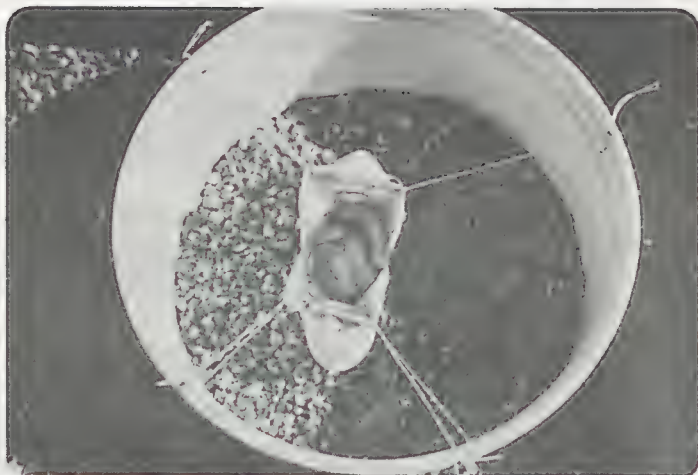


Fig. 1 31 days into incubation 9-11-79

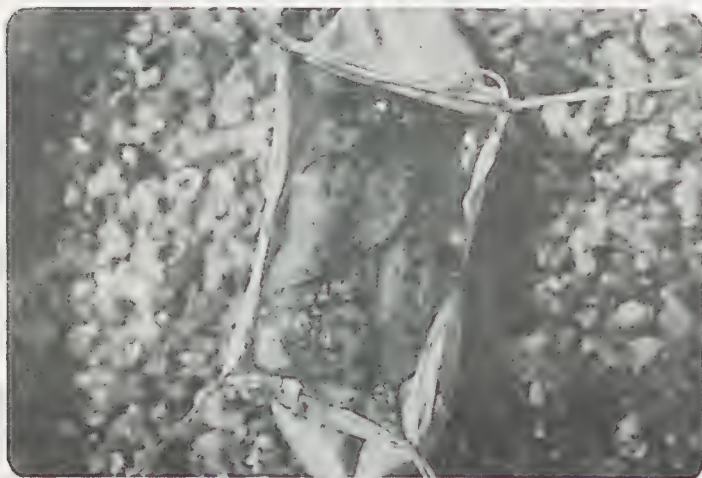


Fig. 2 37 days into incubation 15-11-79



Fig. 3 41 days into incubation 19-11-79



Fig. 4 53 days into incubation 1-12-79 (date of birth)

No extra moisture was given to the vermiculite during this humidicrib experiment and the only time that the lid of the container was removed was when photographs were being taken. Clear observations could be made at any time. To obtain a better view for both observation and photography, the embryo was probed and moved with a sterilized seeker.

Finally on the 1st December, the young male crawled over the side of his egg and came into the world several hours in front of the others in the good eggs. He came out after spending 23 days in a very open environment and was in excellent condition.

When one is a keeper, breeding is the ultimate aim, and when unforeseen situations such as this occur new and interesting challenges present themselves. It is particularly rewarding to succeed when a failure is fully expected. Two of the young were born on the 1st December and the other two on the 2nd December. (53 days & 54 days).

	<u>Total Length</u>	<u>Weight (after birth)</u>
Specimen 1.	31.0 cm	7.1 gm (Humidicrib Specimen)
Specimen 2.	30.8 cm	6.4 gm
Specimen 3.	28.3 cm	8.0 gm
Specimen 4.	31.0 cm	7.3 gm

All of the young shed their first skins on the 11th December, 11 & 12 days after their birth. They are feeding on small skinks, Lampropholis guichenoti.

The technique described allowed the study of the embryo's development from about mid term to birth. I plan further experiments to determine whether development can also be observed and recorded when similar eggs are artificially split or cut at earlier stages. With the use of aseptic or sterile techniques it may be possible to observe the entire development of the embryos of other reptile species that lay parchment shelled eggs.

Notes on Kreffts Dwarf snake (Cacophis kreffti).

By R. Wells, P.O. Box 83 Blacktown. NSW 2148

Four gravid specimens of C. kreffti were found near Karangi, N.S.W. during December, 1977. All were taken along the verges of wet sclerophyll forest, in the following circumstances. Specimens 1 and 2 were found together (ca. 300mm apart) beneath a small log on damp soil, positioned about 100m from a creek (SW aspect of hillslope). When the log was disturbed, one specimen immediately attempted to escape by quickly entering a hole in the soil. Specimen 3 was discovered beneath a large plank of wood closer to the creek (ca. 5m) on damp soil and leaf litter (N.E. aspect). Specimen 4, was found beneath a small block of shale on soil and broken shale on the western aspect of a hill, at another site.

Specimens 1-3 were taken on the 15th December, 1977 and No. 4 on 16th

December, 1977. It was quite obvious that all were in a gravid state at the time of collection.

Upon returning home, each specimen was placed in a plastic 2 litre ice-cream container in anticipation of egg-laying.

All laid their eggs during darkness (evenings) between 21-25 December 1977 (see table 1). The mean SV length of laying females was 265.5mm. Clutch size ranged from 2-3 and the egg dimensions ranged from 22-30mm in length and 8-10 mm width (mean 26.8 x 9.1). All eggs were white and cylindrical in shape when laid, and appeared to be in excellent condition; however, they failed to hatch.

Worrell (1963) and Gow (1976) stated that 2-3 eggs were produced, while Kinghorn (1956) reported 6-10 young. It would seem from the above that Worrell's and Gow's observations have been supported.

Table 1.

<u>Sp. N°</u>	<u>SV</u>	<u>VT</u>	<u>N° eggs</u>	<u>Date Laid</u>	<u>Egg Dimensions</u>
					(L x W mm)
1	255	32	2	21/12/77	30 x 8
					28 x 9
2	240	32	2	22/12/77	28 x 9
					27 x 9
3	265	35	2	22/12/77	24 x 9
					22 x 9
4	302	40	3	25/12/77	27 x 10
					29 x 9
					26 x 10

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Some aspects of the population dynamics of *Lampropholis guichenoti* in Toohey Forest near Brisbane.

by D. Milton, c/- Plague Locust Commission, RAAF Base, Dubbo. NSW 2830

SUMMARY

Fortythree individuals of the garden skink, *Lampropholis guichenoti* were collected over a ten week period in Toohey Forest. Three distinct age classes were established. The population appeared to be randomly dispersed throughout the one hectare study site. An estimate of the population density of approx. 90 lizards/ha was computed. Of the eleven recaptures, the average distance moved was 37.26 metres.

INTRODUCTION

Despite being one of the most abundant species in suburban gardens in eastern Australia (Cogger 1975), little is known regarding the life history, ecology, and population dynamics of Lampropholis guichenoti. Dale (1973), Pengilley (1972) and Milton (unpublished data) have noted that each female lays three eggs which are deposited in moist soil beneath a rock. Over one thousand eggs have been observed in a 50m x 10m area, in five separate egg deposition sites (Milton, unpublished data). Heatwole (1976) recorded only one sexual cycle per season, with eggs laid in November and December; hatchlings, are abundant in February and grow rapidly till sexual maturity is reached, growth then continuing at a reduced rate.

Initially the purpose of this project was to compare the dynamics of two populations of (Lampropholis guichenoti) one in a burnt area which was fired in November 1977, and the other an adjacent unburnt site which had last been fired in 1971. But due to the sampling difficulty and the apparent small population present in the unburnt area, insufficient data were collected and efforts were then concentrated on the burnt area. Seven captures were made in the unburnt area and as no individuals were recaptured, no analysis of this data was possible.

METHODS

The burnt study site was a mixed Eucalyptus planchoniana/bailvana/umbra and Angophora woodsiana dry sclerophyll forest with Xanthorrhoea spp dispersed through the understory and stands of Pultenaea villosa in the wetter areas. An area of grasses, dominated by Themeda australis and Aristida spp was present in south-eastern quarter. A track with several logs across it ran from east to west up the slope of the study site, parallel to a small, shallow, flowing creek, to the north.

The lizards Lampropholis guichenoti were collected by hand. Individuals were marked by clipping toes (Bradshaw 1971) and released immediately after snout-vent length was determined. The study area was covered systematically by the five collectors, correction for non-random sampling, due to the varying catching ability of the collectors was unnecessary provided the individuals caught mixed randomly throughout the population (Seber 1973).

Since only active lizards were sampled, collecting was done weekly at 8am-10am except under inclement conditions. Measurements were made with vernier calipers by one collector/recorder. Single digits were clipped till all digits were used, then one digit from each side was removed, preferably from front and opposite hind feet.

RESULTS

The results of the snout-vent length measurements obtained from the 43 individuals in the burnt area and 7 individuals in the unburnt area show three distinct peaks, from 14-17mm, 20-25mm and 27-34mm. The largest individual was 37mm, and the smallest was 14mm. SVL.

The results of the recapture data (Figure 1) show that individuals move in their foraging activities. There is a standard deviation of 29.23m so that, given the large distances moved within the study area, there must be a continual movement into and out of the study area.

Figure 1 could indicate that some individuals show little tendency to forage widely. Although at least a month elapsed between captures of individuals 18 and 11, they were recaptured within close proximity of their initial capture point. They may also have returned to the area by chance. Three individuals were recaptured twice and could theoretically complete a triangle corresponding to its home range. Tinkle et al (1962) found that at least five or six recaptures were necessary before accurate home range estimates were obtained. Hirth (1963) found that in Iguanids and Teuidids, 10-14 recaptures were necessary before a home range estimate could be calculated.

The method of summing successive captures over the period of the study as used by Bustard (1969, 1970, 1971), Tinkle et al (1962) tends to over estimate the population density (see Bustard 1969). The initial marking had a disturbing effect on the lizards with only 18% being recaptured during the rest of the study. Possibly the assumption of random mixing of marked individuals is invalid, depending on the way the marking affected these individuals.

DISCUSSION

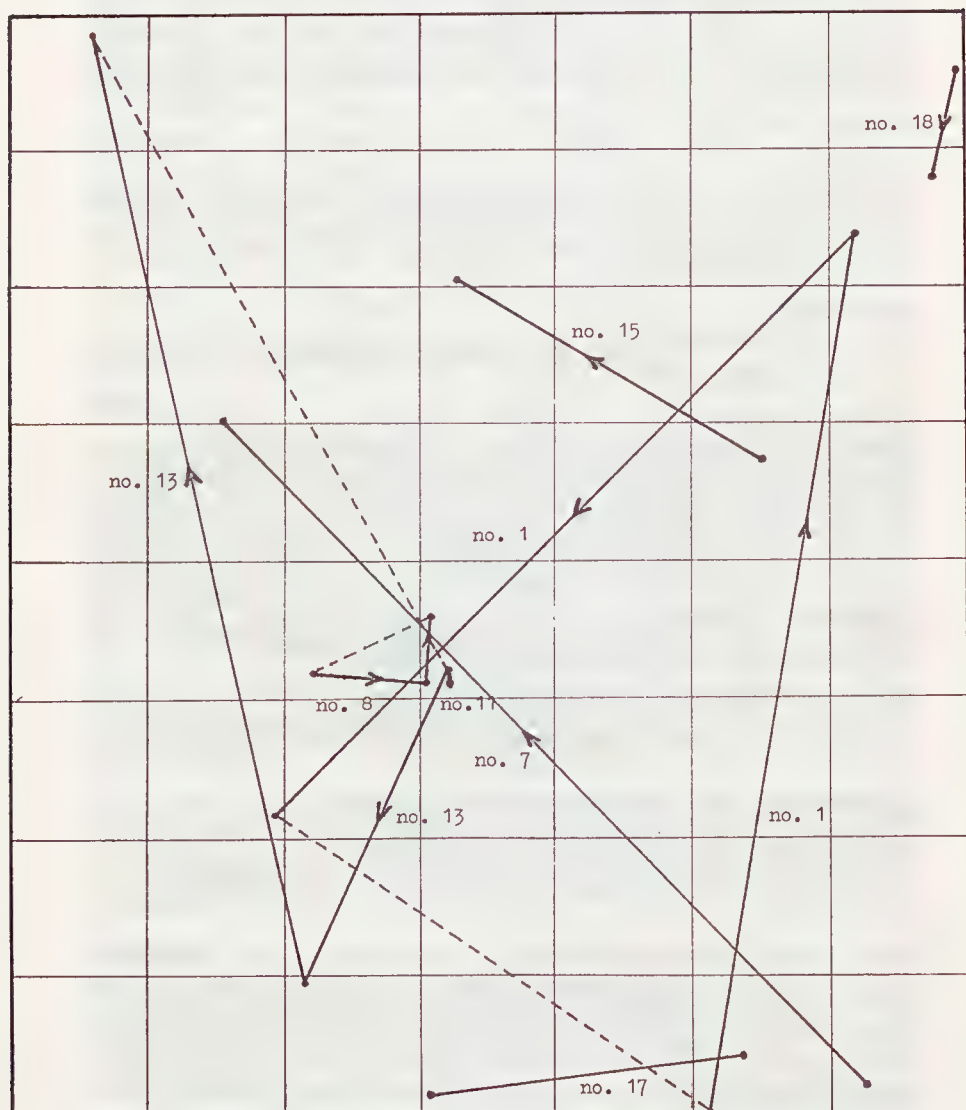
The results obtained, suggest that Lampropholis guichenoti is most comparable to Eumeces fasciatus of Fitch (1954) in that the distance moved involved no territoriality and no home range. It is comparable to Leiolopisma zelandica in its congregating behaviours. The age structure of the population shows three distinct groupings which most likely corresponds to the age-classes distinguished by Brooks (1967) Bustard (1969). Heatwole (1976) noted hatchlings abundant in February. But throughout the entire study hatchlings in the 14-17mm age class were rare except for the sample in early May. This suggests that possibly, in Queensland, this species lays two clutches annually or that they breed later, hence the late appearance of the juveniles. Bustard (1971) noted highest mortality amongst juveniles, and their relative abundance suggests that in Lampropholis guichenoti this is also the case. Brooks (1967) and Alcalá & Browa (1967) found that juveniles made up at least 50% and 71% of the respective skink populations they studied.

Despite the inadequacy of the project, in terms of time available and the sampling biases that resulted from the marking procedure, a crude estimate of the density could be approximated from the methods used and appeared to be about 85-90 individuals/hectare.

The results of the recapture data tends to suggest wide movement patterns when foraging. Although stomach content was not examined, Swanson (1976) and McPhee (1959) found that L. guichenoti eats flies, termites, ants, mosquitoes and worms which, depending on the microhabitat, may be less abundant in certain parts of the study area, hence the wide foraging activity.

Aggregation in the adults appears to be attributable to a favourable microhabitat of a pile of logs and litter which has developed along the trail. Several individuals were caught in the pile, and in close vicinity. It provided extensive cover, abundant food supply and available moisture. Despite this, the same individuals were not caught in or near the pile regularly, which supports the notion of wide foraging activity. The site's increased favourability is sufficient to draw several individuals to the area regularly, yet insufficient to maintain a population.

Figure 1 Movement Patterns of Individuals in Burnt Study Site



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HERPETOLOGICAL NOTES.

SEAL PREDATION ON A SEA SNAKE

by HAROLD HEATWOLE, Department of Zoology, University of New England, Armidale N.S.W., 2351, Australia and E.P. FINNIE, Taronga Park Zoo, Mosman, N.S.W. 2088, Australia.

A variety of animals have been reported to prey on sea snakes, including seven species of sharks, various teleosts, a salt water crocodile, an octopus and sea eagles; however, the only species reported to regularly take sea snakes are sea-eagles (Haliastur indus and Haliaeetus leucogaster) and the tiger shark (Galeocerda cuvieri) (Heatwole 1975).

Although scarred individuals of Pelamis platurus have been found occasionally, the evidence of injury in that species is low compared to many other sea snakes (Heatwole 1975). In captivity, predatory fish sympatric with P. platurus tend to reject it as prey, although "naive" fish from areas lacking sea snakes may attack and show symptoms of discomfort or even die as a result (Rubinoff and Kropach 1970). So this conspicuously coloured (yellow and black) snake may be relatively immune to predation.

The present paper represents the first report of predation upon Pelamis platurus under natural conditions and is the first report of a mammal preying upon any species of sea snake.

On 5 September 1977 an adult male leopard seal (Hydrurga leptonyx) in poor condition was captured on Whale Beach, N.S.W. and taken to Taronga Park Zoo in Sydney. The following day it regurgitated a partly digested Pelamis platurus. The tail of the snake measured 45 mm. The body to vent was 410 mm but the anterior end was partly digested and missing. The only other gut contents of the seal were several white contour feathers about 20 cm long. The snake was preserved and is lodged in the Australian Museum (AMR81402).

This record indicates that P. platurus is not completely immune from predation, although it may be relatively so.

Leopard seals and sea snakes probably seldom come into contact and the seal may have been a "naive" predator. The fact that it was found in poor condition and subsequently regurgitated the snake suggests that the snake may have had an ill effect upon it.

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TORTOISE EGG PREDATION AT BROWNES LAKE, MOUNT GAMBIER, SOUTH AUSTRALIA

by KEN GREEN, 342 Baringa Gardens, Melba, A.C.T.

Reading Michael Thompson's article on tortoise egg predation (Herpetofauna Vol. 11, No. 1: 25 - 26) prompted me to look at some notes I wrote on Chelodina longicollis in 1976.

On 29th November 1976 during heavy rainfall I was in one of the craters of Mt. Gambier near Browne's Lake and observed three long necked tortoises (C. longicollis) crossing the road from the direction of the lake and moving towards the slope of the crater.

On subsequent visits to the area I discovered a number of tortoise nests which had been raided by a fox or foxes.

Two nesting sites were being used. One, to the east of the lake, was on a low hill, the other, to the south of the lake, was the slope of the crater leading up to the summit of Mt. Gambier. In the latter site nests ranged from road level to about 40 metres above water level. At road level one nest had been excavated in the hard compacted limestone rubble bordering the bitumen. This nest had been re-opened and 21 eggs were found nearby. On the crater slope itself the nests had been dug in volcanic soil and fine volcanic rubble, and egg laying was observed there on one occasion. Seven eggs were laid and the soil, when investigated shortly after being tamped down, was dry and did not show any evidence of cloacal discharge.

A count of the number of nests destroyed and egg remains was undertaken. In the site to the east of the lake 10 nests had been destroyed and the remains of 68 eggs were found (3 unbroken eggs were found in one nest). In the site to the south of the lake 45 nests had been destroyed and the remains of 342 eggs were found.

The investigation found a total of 55 destroyed nests and 410 broken eggs. In this lake as with Lake Bonney it is possible that predation may be preventing, or seriously reducing, recruitment of young tortoises to the lake population.

A LONGEVITY RECORD FOR LITORIA GRACILENTA

by MRS. R. McANALLY, 19 Karowara Street, The Gap. QLD. 4061

On 26 December, 1972, and adult Graceful Tree-frog (Litoria gracilentia) came into our household after a storm. It was put in an aquarium where it lived until its death on 2 October, 1979. This was approximately a period of 6 years 9 months. The frog has been donated to the Queensland Museum (registration number J36984). The snout-vent Length was 40.2mm. Mr. Glen Ingram, the curator of Amphibia, confirmed it was an adult female L. gracilentia.

It is impossible to state the exact age of the frog, because it was already full grown when caught. If however, metamorphosis had occurred the year before in early summer, she would have been approximately seven

and three-quarter years old. This appears to be a reasonable assumption for her minimum age.

Tyler (1976) mentions that L. caerulea has been known to live for up to sixteen years but I do not know of any other records of longevity for Australian Tree-frogs.

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NOTES ON CACOPHIS SQUAMULOSUS

by R. WELLS, P.O. Box 83 Blacktown, N.S.W. 2148

On the 15th December, 1977, the author found a freshly killed adult (SV: 640mm) of C. squamulosus along a fire trail in dense sclerophyll forest near Coffs Harbour, N.S.W.

Dissection revealed that the specimen contained 11 fully developed white leathery eggs, 5 being in the left oviduct and 6 in the right.

A further gravid specimen (SV: 580mm) from Mt. Warning, N.S.W., was also examined (collected 8th December, 1979); a total of 6 fully formed eggs were present in the right oviduct the most posterior of which measured 30 x 40mm. It is probable that part of the clutch had already been laid when the specimen was found.

Kinghorn (1956) stated that the species was ovoviviparous, citing an instance where 10 embryos were found in a specimen. However other authors have claimed that it is an egg layer. Worrell (1963) mentions that 5-12 eggs are produced and Gow (1976) claimed about 6 eggs is an "average" clutch. Van der Straaten (1973) reported a clutch of 9 eggs from a specimen presumably collected around Brisbane (SV: 609.5mm). The eggs were laid on the 1st January 1963 but only two were successfully incubated (hatched 4th April 1963). The hatchlings were 162 and 165mm in total length.

It would seem from the above that at least some specimens produce eggs. This obvious discrepancy in the literature may be worth further study.

ACKNOWLEDGEMENTS

Mr G Harold and M Hanlon kindly made available the Mt. Warning Material.

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RANGE EXTENSION FOR AMPHIBOLURUS DIEMENSIS

by T. TASOULIS, 33 Frederick Street, Dudley, N.S.W. 2290

On the 3rd January, 1978 the author collected a 13cm Mountain dragon (Amphibolurus diemensis) basking on a rock in a large stony outcrop at Dungowan Dam (Lat. 31°13'S. Long. 151°06'E.) approximately 25km south-east of Tamworth N.S.W. It was passed on to Mr. K. Markwell of Cardiff N.S.W. who kept it in captivity until its escape one month later. Prior to the discovery of this specimen the northern-most limit in the distribution of this species was regarded as the Sydney area (Cogger 1975). It is interesting to speculate that the presence of this specimen could indicate a separate, isolated population of the species in the high altitude areas of the New England Tableland. This area contains isolated populations of many species of southern reptiles, including Austrelaps superbus, Drysdalia coronoides, Sphenomorphus tympanum, Tiliqua casuarinae and T. nigrolutea.

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RECORDS OF THE LONG-NECKED TORTOISE CHELODINA LONGICOLLIS

by GRAEME ARMSTRONG, 7 Frater Court, East Doncaster, VIC. 3109

On 29th November 1978 I found a Long-necked Tortoise leaving a nest site at Doncaster, Vic. which was very close to a large agricultural dam. The nest was approximately 15cm x 5cm and the soil, which was fairly hard clay, appeared to have been moistened. Twelve eggs were found.

Eggs sizes:	30mm x 19mm (1)	32mm x 20mm (1)
	30mm x 20mm (1)	33mm x 17mm (1)
	31mm x 18mm (1)	33mm x 18mm (1)
	32mm x 19mm (4)	33mm x 20mm (2)

Average size; 31.88mm x 19mm

On the 30th November 1978 and 28th January 1979 three more nests were discovered. All had been dug up and the egg contents apparently eaten. These nests were located about 1.5 metres from the waters edge.

Of the 12 eggs put under incubation, 5 hatched. One on 9th April 1979, and four on 15th April 1979 (137 days).

<u>Average Carapace length:</u>	28mm	<u>Average Carapace width:</u>	21.6mm
<u>Average Plastron length:</u>	21mm	<u>Average Plastron width:</u>	16.5mm
<u>Average Shell height:</u>	11mm	<u>Average head & neck length:</u>	25mm

NOTES OF HATCHLING CHELODINA LONGICOLLIS (SHAW)

by K.J. KENNERSON, 46 Berith Road, South Wentworthville. NSW 2145

On the 14th October 1979 five juvenile C. longicollis were discovered swimming in a pond in the author's outdoor reptile enclosure. Measure-

ments of the carapace and plastron were recorded and a comparison was made with average (millimetres) of those recorded by Wells (1973) and Hill (1979) to further support this.

		<u>Kennerson</u>	<u>Hill</u>	<u>Wells</u>
Carapace	{ Length	27.5	25.0	25.4
	{ Width	23.0	22.5	20.2
Plastron	{ Length	23.2	20.0	19.8
	{ Width	15.3	12.5	16.6

Cann (1978) reports that nesting takes place during spring and early summer and juveniles appear between the months of January and March. However, he cites an instance of a six month incubation period.

If the five juveniles were hatched from a reported egg-laying which occurred in the same enclosure on 15th December 1978, then there exists the possibility that incubation extended beyond that normally expected for the species.

ACKNOWLEDGEMENTS:

Thanks are due to Jenny and Greg Cockrane for reported observations and care of the juveniles and Richard Wells for criticism of the note.

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AN EXAMPLE OF COMMUNITY EGGLAYING IN OEDURA TRYONI (DE VIS)

By DAVID MILTON. 10 Stanford St. Robertson 4109

Community egg-laying has been well documented amongst skinks the best known examples being the garden skinks Lampropholis delicata and L. guichenoti (Dale 1973, Davey 1970, Wells 1979), where deposits of over 200 eggs have been found at a single burrowing site. Covacevich and Limpus (1972) recorded an estimated 500-600 Demansia psammophis eggs and hatchlings at a site 20km. south of Gympie. They suggested that the site was probably chosen by numerous females as it was the only suitable site in an unsuitable area.

On 17th March 1979, a total of 32 Oedura tryoni eggs were discovered at two separate, but nearby sites, in dry sclerophyll forest 100m S. of Little Yabba Ck., 152°39', 26°37' approx. 6km S SW, of Kenilworth, south east Queensland. Both sites were beneath well embedded pieces of fence paling, containing 20 and 12 eggs respectively. The eggs ranged in size from 29 to 35mm, average 32.8mm. All eggs were removed and incubated at a constant temperature of 27°C and under constant humidity, until they had all hatched. This took about three weeks. The juveniles when hatched, averaged 34.3mm, SVL.

Cogger (1979) records O. tryoni as laying two parchment-shelled eggs, so that these aggregations represent up to 16 females laying their eggs at the one site. Judging from the density of available home-sites and detected individuals in the surrounding five hectares, some females must have travelled up to one kilometre.

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NOTES ON THE BIRTH OF THE PYGMY SPINY TAILED SKINK, EGERNIA DEPRESSA (GUNTHER) IN CAPTIVITY

by KEITH DAY, 4/62 The Strand, North Ward, Townsville. QLD.

Two adult pairs and one Juvenile E. depressa were kept in a glass aquarium, 1.3m long x 0.4m high x 0.3m wide, open aired with two piles of rocks arranged in crevices on a fine sand base.

The actual mating was not observed.

Food taken consisted of wood cockroaches, beetle larvae, canned peas, grated apple and plums. Water was placed in once a week and removed after the second day.

The night before the births, furious fighting broke out and all other E. depressa sharing the same pile of rocks as the gravid female were driven out. The female achieved this by biting the other lizards rear leg and twisting.

Two young were born on the 20th January, 1980.

<u>Weight</u>	<u>Lengths vent-snout</u>	<u>Lengths vent-tail</u>
4.5gr.	53.9mm.	21.2mm.
4.5gr.	58.8mm.	21.9mm.
42.0gr. (mother)	116.1mm.	52.2mm.

The young sloughed on the 22nd January, 1980 and attempted to take small wood cockroaches.

HISSES AND CROAKS.

THE AFFILIATION:

The Third Convention will be held in Melbourne in May this year. Unfortunately the Darwin venue presented several unforeseen problems which together with the travelling distances and costs involved made Melbourne the most suitable choice. The Convention has been organised to co-incide with the Melbourne Zoo's Herpetological Symposium so that delegates can get two herpetological happenings for the travelling costs of one!

More details about programs for both the Convention and the Symposium, transport and billeting can be obtained from your committee. If you do not belong to one of the affiliated societies write to the society in your area or to the Convenor.

ADELAIDE:

Last year the SAHG participated in a faunal survey of the Marble Range area at the lower end of Eyre Peninsula. The one week herpetological survey was co-ordinated by the Nature Conservation Society and forms part of a thorough investigation of the areas plants and animals.

The Group has also received a further grant of \$1000 from the State Government to further its survey and educational programs. A slide catalogue of South Australia's reptiles is to be completed, public display facilities are to be further improved and a field survey program concentrating on the rural areas near Adelaide (especially the Hills) is to be mounted.

During the Australia Day long weekend the Group surveyed the Uro Bluff area and recorded 31 species of reptiles, including the Half-girdled Burrowing Snake (Simoselaps semifasciata).

MELBOURNE:

There was a slight increase of field trip work over the past six months, one as a group outing and the remainder undertaken by a couple of the committee members. Areas visited were Cobbledicks Ford, Euroa, Yea and Walhalla.

The VHS exhibit at this years' Royal Melbourne show was quite successful and was one of the highlights of the 'Animal Nursery'. We did not gain many members from the exhibit but judging from the questions asked by the public and the interest in the answers given we feel the exhibit and promotion was well worth it.

The 'Special Effort' was almost a sell-out and the society cleared \$768. The bulk of this money was used to purchase office equipment.

Breeding of reptiles was once again a highlight this season. Reptiles bred included Colletts snake, Taipan, Water python, Childrens python, Slatey-grey snake, Little File snake, Storr's monitor.

There is still a shortage of articles for our newsletter, but we are keeping up our quota to Herpetofauna. The newsletter is now put out
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quarterly so that two of the newsletter issues coincide with the half-yearly issues of Herpetofauna. That way we can post two items at once and cut costs.

As yet the protective legislation and regulations are still not fully in force.

We are looking forward to hosting the third convention and meeting the attending delegates from interstate and New Zealand. Day (and nights) in Melbourne are invariably lively!

NEW ZEALAND:

A further visit to Great Barrier Island was made in August last year by committee member John West, and in late December-early January six members also visited the island. The survey results are being collated into what will eventually amount to a full Herpetological Survey of the island.

NZHS members from various parts of New Zealand attended the Wellington Herpetological Symposium in late January this year. The Symposium, sponsored by the Wildlife Service, included presentations on many of New Zealand's reptiles and notably on the Tuatara.

Research into the Status of the skink Leiopismis homalonotum is at present being carried out. Recommendations have been made by the NZHS to the Nature Conservation Council on the action considered necessary to the survival of this species, which is very restricted in range.

Legal protection for some N.Z. Lizard species is very close with the revised Wildlife Act likely to come into force early in 1980. The NZHS has outlined the permit system it would like to see introduced to cover members holding protected species, and these recommendations have been accepted by the authorities, and will be implemented.

QUEENSLAND:

There's even better news from Queensland for this issue of Herpetofauna! The North Queensland Herpetological Society officially came into being in late January this year. At the meeting the constitution was presented and adopted and a committee was elected and the Society plans to join the Affiliation.

To date there are thirty members and they have decided there would be a membership fee of \$10. The society will raise funds for running costs etc. by selling the almost endless supply of cane toads that they can pick up in and around Townsville. It conjures up visions of the treasurer collecting toads at the meeting room door and struggling off with a huge sackful after the meeting. This is both a novel and very practical way of raising society funds; perhaps more societies might be set up on this basis in coastal Queensland.

There have been regular monthly field trips mostly near Townsville, but a more distant extended trip is planned and, weather permitting, this will be to Charters Towers.

Noteworthy breeding successes by Society members this year include the Centralian Bluetongue and Copperhead Snake. Member Keith Day also found 27 specimens of the Northern Spade-foot Toad near Townsville - a very

significant range extension.

The society is most grateful to the Queensland National Parks and Wildlife Service for the help and guidance its officers have given and continue to give to the society and its members.

SYDNEY:

The Colo Survey is nearing completion and in November last year the Society again worked in the area.

We anticipate a large AHS involvement in the Third Convention and the Herpetological Symposium in Melbourne in May.

The Society's second exhibition of reptiles at Ku-Ring-Gai in September, 1979 was highly successful. The third exhibition at Royal National Park ended late in January with a very pleasing public response and praise from the National Parks and Wildlife Service. Much of the work falls on the shoulders of a minority (mostly committee members) but the results make it all worthwhile.

The AHS has the first issue of its "Bulletin of the AHS" in press and copies will be distributed to the committees of Affiliated Societies when it becomes available. We will be able to distribute copies throughout the Affiliations at cost, but this will only be done through each society's committee.

The President, Richard Wells recently visited AHS members in Victoria and South Australia and also visited committee members of the SAHG, VHS & WHG. Issues of mutual interest were discussed and the President gave a report on the discussions to the January meetings of the AHS.

Richard has announced his resignation as President of the AHS for personal reasons and because the heavy work load involved in such a position was interfering with various research projects in which he is engaged.

To all those members of the various societies who have helped and supported him during his term of office, Richard would like to express his thanks and appreciation.

WHYALLA:

The Western Herpetology Group has done further survey work in the Coffin Bay National Park and the collection of specimens was gladly received by the South Australian Museum.

Last October, President Peter Hudson and immediate past president Peter Mirtschin hunted for *Parademansia microlepidota* up the Birdsville Track and were partly rewarded with a road killed specimen. They plan a return trip in February this year.

Members Peter Mirtschin and Paul Fennel in conjunction with Dr Richard Davis of the Whyalla Hospital last year published a snake bite identification and treatment manual for use in South Australia's Eyre Region. It has been well received and widely acclaimed. Congratulations to member Greg Johnston who recently received a grant from the Wildlife Conservation Fund to undertake a survey on all forms of wildlife in the Middleback Ranges area south of Whyalla.

NOTES TO CONTRIBUTORS.

"Herpetofauna" publishes original articles on any aspect of reptiles and amphibians. Articles are invited from any interested authors; encouragement is given to articles reporting field work and observations.

1. PUBLICATION POLICY

Authors are responsible for the accuracy of the data presented in any submitted article. Current and formally recognised taxonomic combinations should be used unless the article is itself of a taxonomic nature proposing new combinations or describing new species. Upon publication, copyright in the article (including illustrations) become the property of the Affiliation. The original illustrations will be returned to the author, if requested, after publication.

2. SUBMISSION OF MANUSCRIPT

One copy of the article (including any illustrations) should be submitted, the author retaining a second copy. All material should be typewritten or clearly hand-written and double spaced. Grammar and punctuation should be checked and all pages must be numbered consecutively. The metric system should also be used throughout. All scientific names and subheadings should be underlined. The author's name and address should appear under the title. Latitude and Longitude of localities mentioned should be indicated.

3. ILLUSTRATIONS

Illustrations (drawings, maps or photographs) should be twice the anticipated published size if possible. Drawings should be in Indian ink on high quality, matt white paper. Authors should retain a copy of each illustration.

4. REFERENCES

Any references made to other published material must be cited in the text, giving the author, the year of publication and the page numbers if necessary, e.g. Jones (1968, p24). At the end of the article full reference should be given. (See this Journal).

5. PROOFS

If any changes, other than minor ones, need to be made to the article, a proof with suggested changes will be sent to the author for his revision. Proofs should then be re-submitted by the author as soon as possible.

6. REPRINTS

Free reprints for authors are beyond the financial resources of the Affiliation. Authors of articles who are members of an affiliated society will receive their copy in the normal way. Other authors will have posted to them one copy of the issue of Herpetofauna in which their article appears. Additional copies of Herpetofauna can be purchased from the Editor by authors for \$A1.00 per copy.

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